

APRIL/MAY 2024

**CEMB64A — BIOINOCULANTS  
TECHNOLOGY**

Time : Three hours

Maximum : 75 marks

**SECTION A — (10 × 2 = 20 marks)**

Answer ALL questions.



1. Define Rhizosphere
2. What is a PGPR?
3. State the uses of *Rhizobium*.
4. Define Symbiosis.
5. Define immobilization
6. Give any two examples of symbiotic nitrogen fixers.
7. Give any two examples for phosphate solubilizers.
8. Comment on PSM .
9. Define Endomycorrhizae.
10. What is fungal root?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain in detail about the Non Symbiotic Nitrogen Fixers.

Or

- (b) Explain the various types of bio inoculants used for crop plants.

12. (a) Write a short note characteristic feature of Rhizobium.

Or

- (b) Give an account on mode of field applications of Rhizobium.

13. (a) Briefly explain the role of symbiotic nitrogen fixers in rice cultivation.

Or

- (b) Explain in detail about method of Field applications of symbiotic nitrogen fixers.

14. (a) Elaborately explain about the phosphate solubilising mechanism.

Or

- (b) Give an account on phosphate solubilising microbes and its significance.

15. (a) Elaborately discuss about taxonomy of mycorrhizae.

Or

- (b) Explain the method of isolation of VA Mycorrhizae.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Elaborately discuss about the taxonomic character, isolation and mass multiplication of *Azospirillum*.

17. Describe in detail about the isolation, characterization of Actinorhizal nodules.

18. Elaborately explain the mass multiplication of *Azolla*.

19. Discuss in detail about the mass inoculum preparation of phosphate solubilizers.

20. Elaborately discuss about Mass inoculum production of VAM and a note on its field applications.